

PHYSICAL ENVIRONMENTAL FACTORS

Air Quality

Air quality has been a continuous main concern since the Federal Air Pollution Control Act of 1955. This concern still continues with the signing of the Clean Air Act in 1970 and its amendments in 1977 and recently in 1990. Although Congress had passed three previous Acts, the Clean Air Act of 1970 was the most substantial because it set standards. The Federal Government has set more stringent standards on mobile source emissions through the amendment of 1990. The CAAA of 1990 adds to the process of transportation planning with transportation related provisions. These provisions are greater integration of the transportation and air quality planning processes; expanded requirements for determining conformity of transportation plans, programs, and projects; expanded use of highway sanctions; and a renewed emphasis on controlling growth in vehicle-miles-travelled (VMT) and on reducing congestion levels in certain nonattainment areas. In addition, the Intermodal Surface Transportation Efficiency Act of 1991 states further integration between State and urban area transportation planning is needed for conformity with the CAAA.

Nonattainment areas are areas where mobile source emissions exceed benchmark levels. These areas must meet deadlines in reducing and maintaining standard emission levels. Although Federal law focuses on nonattainment areas, the attainment areas are also very important. The law focuses on keeping them as such. Therefore, the design of a thoroughfare system has a significant effect on the amount of emissions added to the atmosphere. Emissions are reduced wherever traffic is permitted to flow smoothly, or by the reduction of congestion and stop-and-go driving conditions. The reduction of emissions level is created by the more efficient use of fuel offered by free flow conditions.

The layout of the road network has an effect on air quality. A street system that provides easy and direct movement between all sections of the city reduces travel time and distances, subsequently reducing pollutant emissions. VMT in the Plan increases 1.2% in comparison to the existing road network with future travel. However the VHT's decrease. (See Table 7) Farmville's Thoroughfare Plan not only provides free flowing traffic for reduction of emissions in its congested areas; it is a Plan which promotes economic development. This is accounted for by the increase in VMT. Although VMT does increase a little, long range future travel will benefit from this well developed plan, once Farmville becomes the suburbs of Greenville, like Cary is to Raleigh, NC.

TABLE 7 - AIR QUALITY ANALYSIS

TRAVEL YEAR	SYSTEM	VMT	VHT	E M I S S I O N S		
				HC	CO	NO
1991	Existing	426,280	10,670	2,298	24,646	2,931
2020	Existing	594,560	17,770	1,797	20,546	2,672
2020	Plan	601,730	13,280	1,570	16,107	2,780